

Title (en)
Optimized interconnect systems.

Title (de)
Optimierte Verbindungssysteme.

Title (fr)
Systèmes d'interconnexion optimisés.

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Application
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Abstract (en)
A multinodal system is one-way interconnected, two-way interconnected or, more generally, (n)-way interconnected, where (n) is an integer. In a one-way interconnected system, only one connection element couples any two nodes. Or, put another way, only one communication path exists between every node and every other node. A two-way interconnected system, on the other hand, has two connection elements coupling each pair of nodes. Likewise, an (n)-way interconnected system provides (n) independent connection paths between each pair. Such systems are characteristic in that the relationship between the number of independent buses (b), the number of nodes (v), the number of ports (r), and the degree of interconnectedness (n) can be expressed by the equation $b = \frac{v(r-1)}{n}$. Two-way and (n)-way interconnect arrays may be adapted for use in fault-tolerant communications.

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